

Date: Tuesday, 12/5/2006 8:13:10 AM  
User: Kim Johnston

# Process Sheet

|                       |   |                  |                               |
|-----------------------|---|------------------|-------------------------------|
| Customer              | : CU-DAR001 Dart Helicopters Services   | Drawing Name     | : X-TUBE AS 350/355 HI AFT    |
| Job Number            | : 29765A  |                  |                               |
| Estimate Number       | : 12483   |                  |                               |
| P.O. Number           | :   | Part Number      | : D350748241                  |
| This Issue            | : 12/5/2006 S.O. No. :  | Drawing Number   | : D350-748-241                |
| Prsht Rev.            | : NC  | Project Number   | : N/A                         |
| First Issue           | : / / Type : LANDING GEAR   | Drawing Revision | : <del>C UNDER REVIEW</del> D |
| Previous Run          | : 29764A  | Material         | :                             |
| Written By            | :   | Due Date         | : 1/30/2007 Qty: 1 Um: Each   |
| Checked & Approved By | : <u>061205</u>   |                  |                               |
| Comment               | : Est Rev: A New Issue 06-07-05 JLM<br>Est Rev: B Update cadplate process 06-09-12 KJ |                  |                               |

## Additional Product

Job Number:



| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|
|---------|-----------------------|---------------|

|     |    |                  |
|-----|----|------------------|
| 1.0 | DC | DOCUMENT CONTROL |
|-----|----|------------------|



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D350-748-241 CHG001

|     |          |                    |
|-----|----------|--------------------|
| 2.0 | D6018125 | Crosstube Material |
|-----|----------|--------------------|



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Crosstube Material

D6018-125

2.299" OD X 2.000" ID

Batch: 27472

|     |            |                            |
|-----|------------|----------------------------|
| 3.0 | MORI SEIKI | MORI SEIKI CNC LATHE LARGE |
|-----|------------|----------------------------|



Comment: MORI SEIKI CNC LATHE LARGE

1-Fill tube with sand & install plugs on both ends as per Folio FA647

2-Turn first side as per Folio FA647

3-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D350-748-241

|     |     |                              |
|-----|-----|------------------------------|
| 4.0 | QC1 | INSPECT ALL DIM TO DIM SHEET |
|-----|-----|------------------------------|



Comment: INSPECT ALL DIM TO DIM SHEET

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                                |                                 |                |                           |                       |                          |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action<br>Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI AFT

Job Number: 29765A

Part Number: D350748241

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

MORI SEIKI

MORI SEIKI CNC LATHE LARGE



Comment: MORI SEIKI CNC LATHE LARGE

1-Turn second side as per Folio FA647

2-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D350-748-241.

3-Scribe part # as per Dwg D350-748-241

BG 06.12.08

6.0

QC1

INSPECT ALL DIM TO DIM SHEET



Comment: INSPECT ALL DIM TO DIM SHEET

Re 06.12.08

7.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J.E 06/12/08 1

8.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Remove all Machining Marks

Prm/JP

66/12/13

①

9.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Issue P/O: 2725

Heat Treat to min 180 KSI As per Dwg D350-748-241

Sand Blast tube after Heat Treat

Possible Supplier: Vac Aero

Ensure Certificate of Conformity is attached

C 206/12/15 ①

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure certificate of conformaty is attached

Re 7/1/12

**Dart Aerospace Ltd**

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

Date: Tuesday, 12/5/2006 8:13:10 AM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI AFT

Job Number: 29765A

Part Number: D350748241

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

07/04/29

12.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Oil inside of tube with LPS-3 .

A/R

LPS-3

Batch:

M103 581

EL 7-3-15

13.0

BENDING

BENDING MACHINE



Comment: BENDING MACHINE

Bend tube as per Dwg D350-748-241 using CNC bender program D350A and Folio FT

DD 7-3-15

14.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

07/03/21 ①

15.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Remove all marks from tube within limits of D350-748-241

2-Drill Tube as per Dwg D350-748-241 Using DT8876 Drill Jigs,

Set-up drill table as per QSI 010

3-Deburr

4-Engrave Part # and Batch # as per Dwg D350-748-241

45 02-09-01

Jb 7-4-16

16.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

07/05/08

17.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Issue P/O: 3730

Stress relief at 375° for 5 hours

Magnetic Particle Inspect per ASTM E1444

Cadium Plate per QQ-P-416F, Class 1, Type 2

CL 07/05/09

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI AFT

Job Number: 29765A

Part Number: D350748241

Job Number:



Seq. #:

Machine Or Operation:

Description :

Embrittle relief at 375° for 8 hours, Chromate Treat  
Possible Supplier: Southwest United Industries  
Ensure Certificate of Conformity is attached

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage  
Ensure certificate of conformity is attached

*07-06-04*

19.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*07-06-04*

20.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside crosstube as per QSI 005 4.2

2-Paint Outside of Tube as per Dart QSI 005 4.2

*07-06-06*

21.0

QC14

Inspect Spray Paint



Comment: Inspect Spray Paint

Then, Wrap in plastic bag to protect from scratches

*07-06-09*

22.0

D35021

SUPPORT



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

SUPPORT

Batch: *28476*

*07-06-13*

23.0

D2856400

Abrasion Strip



Comment: Qty.: 1.2401 f(s)/Unit Total: 1.2401 f(s)

Abrasion Strip 7.10" long x2

Batch: *32020*

*07-06-13*

**Dart Aerospace Ltd**

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI AFT

Job Number: 29765A

Part Number: D350748241

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

ALS41032225

Insert



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Insert

Batch: 19393

RT 07-06-13

25.0

AN960JD10

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Washer

Batch: 104118

RT 07-06-13

26.0

MS2192020

Clamp (per MIL-DTL-8783C)



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Clamp (per MIL-DTL-8783C)

Batch: 102712

RT 07-06-13

27.0

MS27039110

Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Screw

Batch: 18836

RT 07-06-13

28.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install Ground wire Insert, then insert screw and washer

2-Install Abrasion strips as per Dwg D350-748-241 & QSI 035.

3-Install supports Using Dt8876 as per Dwg D350-748-241, Torque to 60-80 IN-LBS

RT 07-06-13

29.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

2006-11-10

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                                |                                 |                |                           |                       |                          |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action<br>Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng           | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |
|      |      |                                  |                                |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

Date: Tuesday, 12/5/2006 8:13:11 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: X-TUBE AS 350/355 HI AFT

Job Number: 29765A

Part Number: D350748241

Job Number:



Seq. #:

Machine Or Operation:

Description :

30.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-748-241

Location: \_\_\_\_\_

PPP Rev: \_\_\_\_\_

31.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



*W. A. Doherty*

**Dart Aerospace Ltd**

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

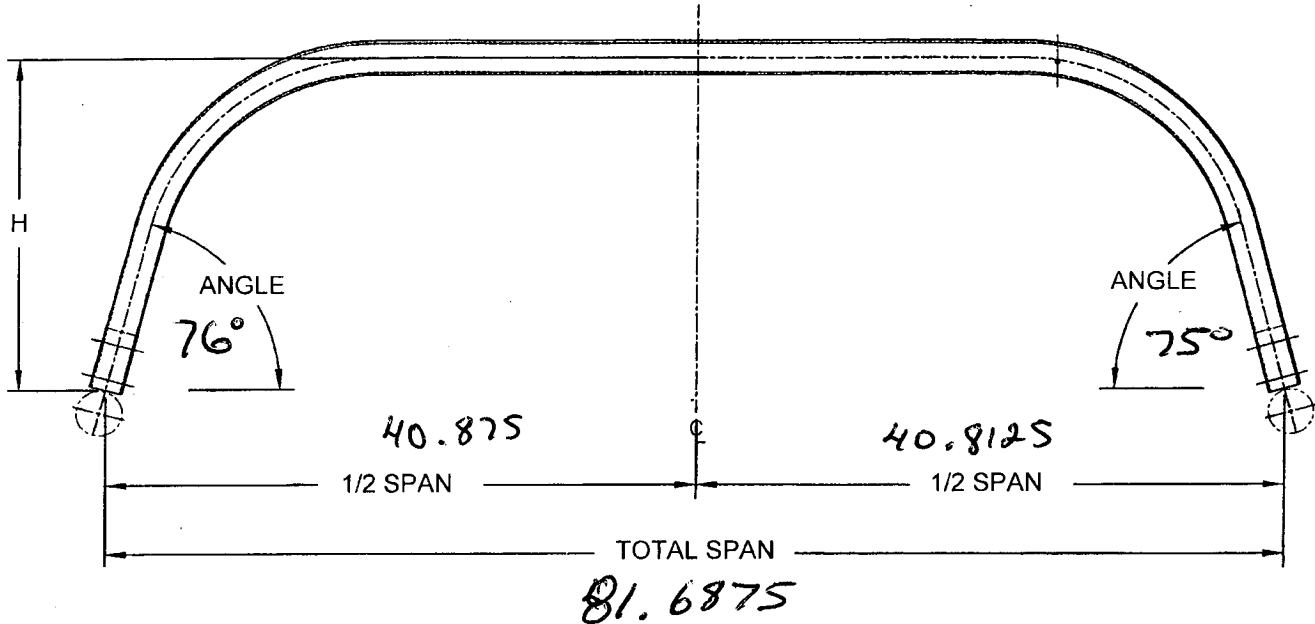
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Crosstube Bend Dimension Sheet



PART NUMBER: 350 748 241

BATCH NUMBER: 29765A

DRAWING: 350 748 241 REVISION: A

H: 31.35

1/2 SPAN: 40.9

TOTAL SPAN: 81.9

ANGLE: 75°

QC 15: M  
 DATE: 07/03/21  
 QTY: 0



|                       |                        |  |                        |
|-----------------------|------------------------|--|------------------------|
| DESIGN<br><i>qp</i>   | DRAWN BY<br><i>qp</i>  | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA |                        |
| CHECKED<br><i>///</i> | APPROVED<br><i>///</i> | DRAWING NO.<br>D350-748-241                              | REV. D<br>SHEET 1 OF 3 |
| DATE<br>06.10.31      |                        | TITLE<br>CROSSTUBE (AS 350/355 HI AFT) NTS               |                        |
| A                     | 06.03.31               | NEW ISSUE  |                        |
| B                     | 06.06.30               | ADD D6018-125 & PRIME AND PAINT                          |                        |
| C                     | 06.08.14               | ADD CAD PLATING  |                        |
| D                     | 06.10.31               | MAG. PARTICLE AND CAD PLATE AS MFD.                      |                        |

RELEASED

06.10.31 *///*

| QTY | P/N           | DESCRIPTION                            |
|-----|---------------|--|
| X   | D350-748-241  | CROSSTUBE ASSEMBLY (AS 350/355 HI AFT) |
| 1   | D6018-125     | CROSSTUBE (OR D6015-125)               |
| 2   | D3502-1       | SUPPORT                                |
| 2   | D2856-400-710 | ABRASION STRIP                         |
| 1   | AELS-1032-225 | INSERT                                 |
| 1   | AN960JD10     | WASHER                                 |
| 2   | MS21920-20    | CLAMP (PER DART SPEC. M-MS21920-20)    |
| 1   | MS27039-1-10  | SCREW                                  |

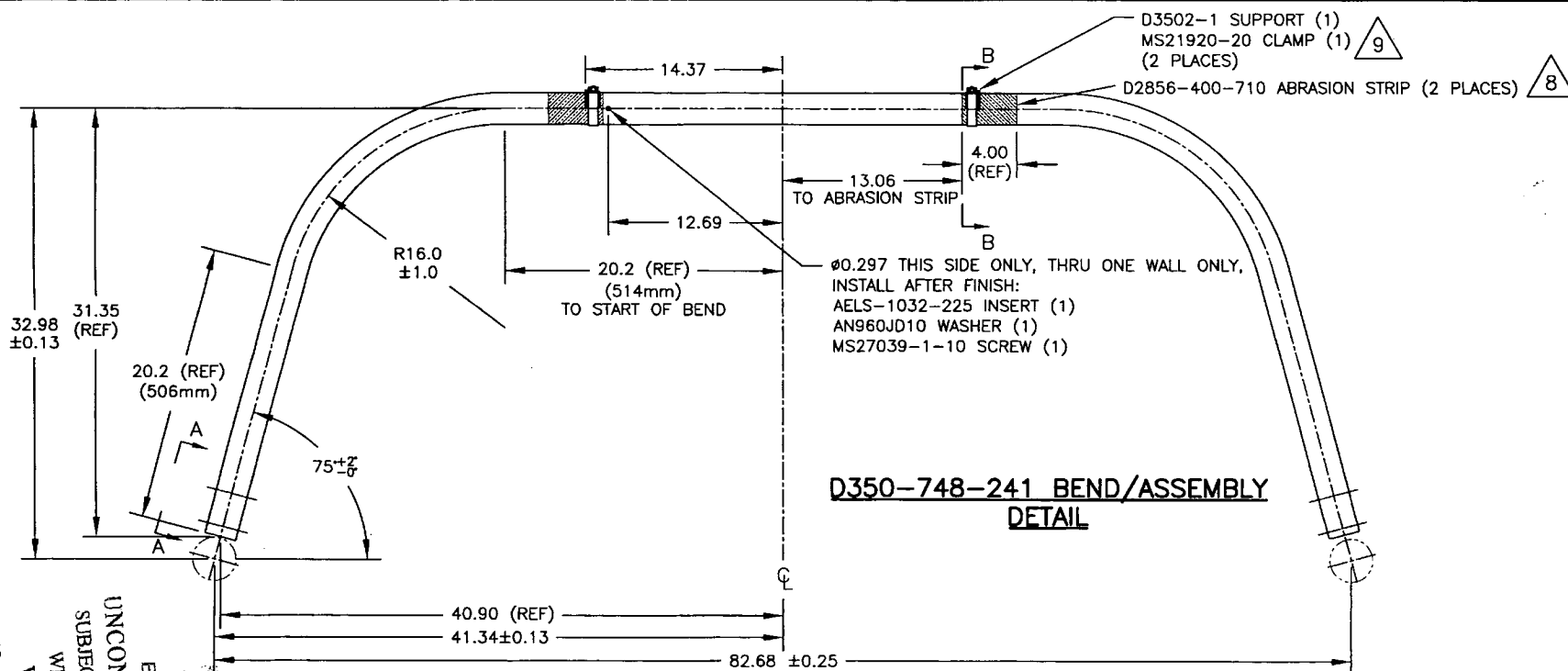
**D350-748-141 CROSSTUBE:**

- 1) MATERIAL: MANUFACTURED FROM D6018-125 OR D6015-125  
FINISHED LENGTH = 122.70±0.06
- 2) MACHINE PER MACHINING DETAIL ON PAGE 3. BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITIONS SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 3) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS.
- 4) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 5) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING
- 6) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2  
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 7) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- 8) INSTALL D2856-400-710 ABRASION STRIP WITH A GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 9) TORQUE MS21920-20 CLAMPS 60 TO 80 IN-LB
- 10) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 11) ALL DIMENSIONS ARE IN INCHES
- 12) PART IS SYMMETRIC ABOUT CENTERLINE EXCEPT FOR Ø0.297 HOLE.

UNCONTROLLED COPY  
ENGINEERING  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 29765A

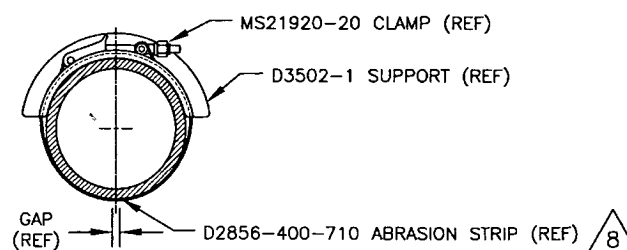
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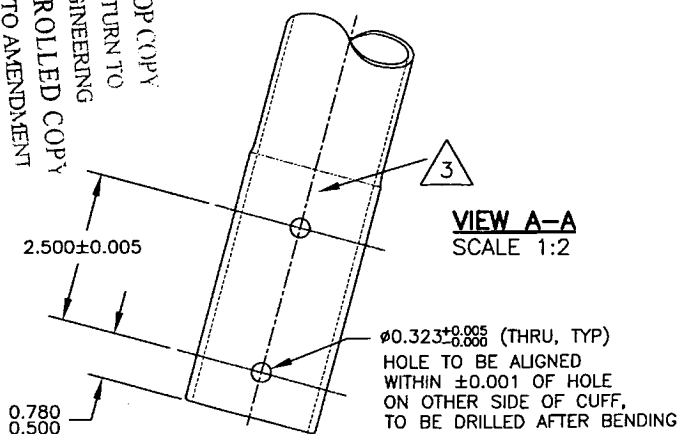


### D350-748-241 BEND/ASSEMBLY DETAIL

### SECTION B-B SCALE 1:2



### VIEW A-A SCALE 1:2



WORK ORDER  
NO. 29765A  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
SHOP COPY  
RETURN TO  
ENGINEERING

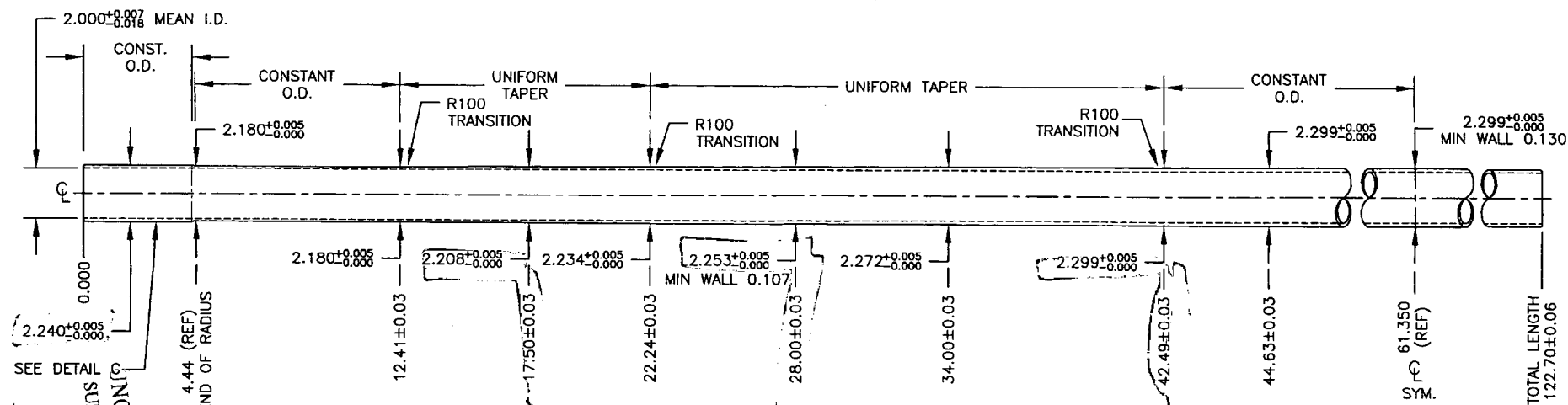
RELEASED

06-10-31

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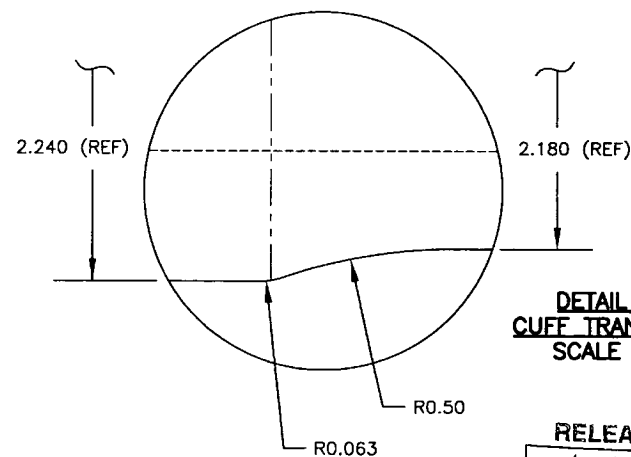
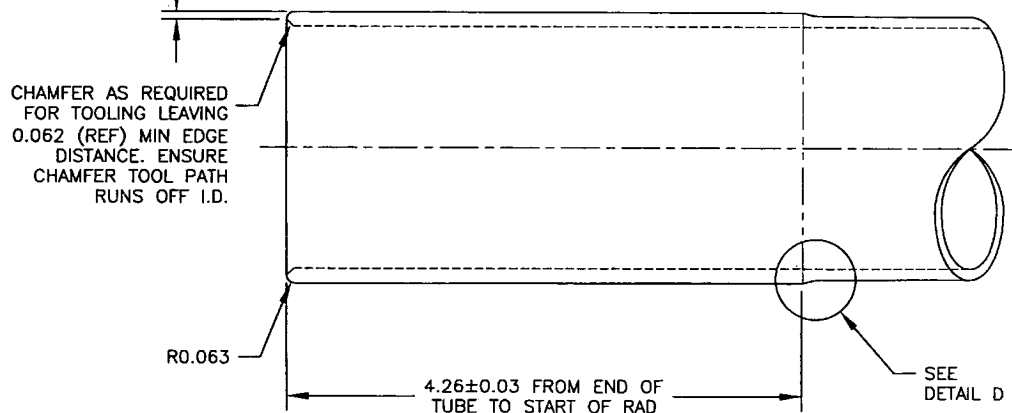
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|         |          |          |                               |                             |  |
|---------|----------|----------|-------------------------------|-----------------------------|--|
| DESIGN  | gp       | DRAWN BY | gp                            | <b>DART</b>                 | DART AEROSPACE LTD.<br>HARRISBURG, ONTARIO, CANADA |
| CHECKED | #        | APPROVED | #                             | DRAWING NO.<br>D350-748-241 | REV. D<br>SHEET 2 OF 3                             |
| DATE    | 06.10.31 | TITLE    | CROSSTUBE (AS 350/355 HI AFT) | SCALE                       | 1:8  |



# D350-748-241 MACHINING DETAIL

## DETAIL C: CUFF SCALE 1:1



## DETAIL D: CUFF TRANSITION SCALE 9:1

RELEASED

06.10.31

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|                  |  |                             |  |
|------------------|--|-----------------------------|--|
| DESIGN<br>qp     | DRAWN BY<br>qp                         | <b>DART</b>                 | DART AEROSPACE LTD.<br>WARRIMUR, ONTARIO, CANADA |
| CHECKED<br>#     | APPROVED<br>#                          | DRAWING NO.<br>D350-748-241 | REV. D<br>SHEET 3 OF 3                           |
| DATE<br>06.10.31 | TITLE<br>CROSSTUBE (AS 350/355 HI AFT) | SCALE<br>1:4                |  |



|   |  |                                |
|---|--|--------------------------------|
| <b>DART AEROSPACE LTD</b>                 |  | <b>Work Order:</b>             |
| <b>Description:</b> Crosstube Assembly    |  | <b>Part Number:</b> D350748241 |
| <b>Inspection Dwg:</b> D350-748-24 Rev: C |  | <b>Page 1 of 1</b>             |

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

| Inspection Sheet<br>Drawing Dimension | Tolerance | Actual<br>Dimension | Accept | Reject | Method of<br>Inspection | Comments |
|---------------------------------------|-----------|---------------------|--------|--------|-------------------------|----------|
| SIDE A                                | 2.240     | +0.005<br>-0.000    | 2.212  | /      |                         |          |
|                                       | 2.180     | +0.005<br>-0.000    | 2.185  | /      |                         |          |
|                                       | 2.208     | +0.005<br>-0.000    | 2.211  | /      |                         |          |
|                                       | 2.234     | +0.005<br>-0.000    | 2.237  | /      |                         |          |
|                                       | 2.253     | +0.005<br>-0.000    | 2.256  | /      |                         |          |
|                                       | 2.272     | +0.005<br>-0.000    | 2.276  | /      |                         |          |
|                                       | 2.299     | +0.005<br>-0.000    | 2.302  | /      |                         |          |
|                                       | .063      | +0.010<br>-0.010    | .063   | /      |                         |          |
|                                       | R.50      | +0.010<br>-0.010    | .500   | /      |                         |          |
|                                       | 4.26      | +0.030<br>-0.030    | 4.26   | /      |                         |          |
|                                       |           |                     |        |        |                         |          |
| SIDE B                                | 2.240     | +0.005<br>-0.000    | 2.241  | /      |                         |          |
|                                       | 2.180     | +0.005<br>-0.000    | 2.184  | /      |                         |          |
|                                       | 2.208     | +0.005<br>-0.000    | 2.211  | /      |                         |          |
|                                       | 2.234     | +0.005<br>-0.000    | 2.238  | /      |                         |          |
|                                       | 2.253     | +0.005<br>-0.000    | 2.256  | /      |                         |          |
|                                       | 2.272     | +0.005<br>-0.000    | 2.276  | /      |                         |          |
|                                       | 2.299     | +0.005<br>-0.000    | 2.301  | /      |                         |          |
|                                       | .063      | +0.010<br>-0.010    | .063   | /      |                         |          |
|                                       | R.50      | +0.010<br>-0.010    | .500   | /      |                         |          |
|                                       | 4.26      | +0.030<br>-0.030    | 4.26   | /      |                         |          |
|                                       |           |                     |        |        |                         |          |
|                                       | 122.7     | +0.06<br>-0.06      | 122.7  | /      |                         |          |
|                                       |           |                     |        |        |                         |          |
|                                       |           |                     |        |        |                         |          |
|                                       |           |                     |        |        |                         |          |
|                                       |           |                     |        |        |                         |          |

|                        |                        |                            |                   |
|------------------------|------------------------|----------------------------|-------------------|
| <b>Measured by:</b> BG | <b>Audited by:</b> J.G | <b>Prototype Approval:</b> | N/A               |
| <b>Date:</b> 06.12.08  | <b>Date:</b> 06/12/08  | <b>Date:</b>               | N/A               |
| <b>Rev</b>             | <b>Date</b>            | <b>Change</b>              | <b>Revised by</b> |
| A                      |                        | New Issue                  | KJ/JLM            |
|                        |                        |                            | <b>Approved</b>   |

|   |  |                     |                     |
|---|--|---------------------|---------------------|
| <b>DART AEROSPACE LTD</b>                                   |  | <b>Work Order:</b>  |                     |
| <b>Description:</b> Crosstube Assembly (AS350/355 High Aft) |  | <b>Part Number:</b> | <b>D350-748-241</b> |
| <b>Inspection Dwg:</b> D350-748-241 <b>Rev:</b> C           |  | <b>Page 1 of 1</b>  |                     |

### FIRST ARTICLE INSPECTION CHECKLIST

☒ **First Article**
☐ **Prototype**

|        | Inspection Sheet<br>Drawing Dimension | Tolerance | Actual<br>Dimension | Accept | Reject | Method of<br>Inspection | Comments |
|--------|---------------------------------------|-----------|---------------------|--------|--------|-------------------------|----------|
| SIDE A |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
| SIDE B |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |
|        |                                       |           |                     |        |        |                         |          |

|                     |  |                    |  |                            |  |     |  |
|---------------------|--|--------------------|--|----------------------------|--|-----|--|
| <b>Measured by:</b> |  | <b>Audited by:</b> |  | <b>Prototype Approval:</b> |  | N/A |  |
| <b>Date:</b>        |  | <b>Date:</b>       |  | <b>Date:</b>               |  | N/A |  |

|            |             |                              |                   |                 |
|------------|-------------|------------------------------|-------------------|-----------------|
| <b>Rev</b> | <b>Date</b> | <b>Change</b>                | <b>Revised by</b> | <b>Approved</b> |
| A          |             | New Issue (P/O D350-748-201) | KJ/JLM            |                 |



**VAC AERO**  
INTERNATIONAL INC.

**RELEASE NO**

GST No. : R105468102

OAK 82647-1



HEAD OFFICE  
1371 SPEERS ROAD, OAKVILLE, ONTARIO  
CANADA L6L 2X5  
TEL: (905) 827-4171 FAX: (905) 827-7489



2009 WYECROFT ROAD, UNIT B  
OAKVILLE, ONTARIO  
CANADA L6L 6J4  
TEL: (905) 827-7377 FAX: (905) 827-1380



QUEBEC DIVISION  
7450 RUE VÉRITÉ STREET, ST. LAURENT, QUÉBEC  
CANADA H4S 1C5  
TEL: (514) 334-4240 FAX: (514) 334-6269

01/11/2007

MM/DD/YYYY

PAGE : 1

BILL TO: 1DAR01  
DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON

SHIP TO: DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON

K6A 1K7

K6A 1K7

| DATE SHIPPED     | SHIP VIA     | F.O.B. |
|------------------|--------------|--------|
| 01/11/2007       | EPIC EXPRESS | ORIGIN |
| CUSTOMER P/O No. | JOB No.      | TERMS  |
| PO00002725       |              | COD    |

| PART No.  | DESCRIPTION | UOM | QTY<br>ORD | QTY<br>SHPD | TEST RESULTS |
|---|-------------|-----|------------|-------------|--------------|
| D350-CROSS TUBES D350-748-141-241   |             | EA  | 8          | 8           |              |
| <p>Process Specifications: Procedure: 4353<br/>HEAT TREATED TO 180-200 KSI PER AMS 2759-1C<br/>100% HARDNESS TESTED PER ASTM E-18<br/>HRC 40-43<br/>MATERIAL: 4130</p> <p>REF. PS# 59054<br/>RE: B29758A, B29757A, B29760A, B29765A, B29761A, B29764A,<br/>B29763A, B29762A</p> |             |     |            |             |              |

**100% HARDNESS TESTED**  
8 PCS.

42/43 HRC



*Signature*  
02/11/29

I hereby certify that the material covered by this release note has been inspected and tested and conforms to all specifications relevant thereto in accordance with the conditions of the contract / or purchase order.

ON BEHALF OF VAC AERO INTERNATIONAL INC



*Signature*  
Authorized Q.C. Inspector



VACUUM BRAZING - HEAT TREATING - SPECIAL PROCESSING - FURNACE EQUIPMENT  
TURBINE COMPONENT OVERHAUL - PLASMA AND OTHER COATINGS





# Packing Slip



## Cadorath Plating Co. Ltd.

2150 Logan Avenue, Winnipeg, Manitoba R2R-0J2

Phone: (204) 633-9420 Fax: (204) 633-8033

**INVOICE NUMBER:**

34601

**Sold To:**

Dart Aerospace Ltd.

1270 Aberdeen St.

Hawksbury, ON K6A 1K7

**ShipTo:**

Net 2% Interest Per Month charged on Overdue Accounts.

Any claims for shortages, overcharges, or damaged goods must be made within seven (7) days from receipt of goods.

| Customer Order #: | Date Received: | Terms:      | G.S.T. #:         | Ship Via: | Ship Date:  |
|-------------------|----------------|-------------|-------------------|-----------|-------------|
| 3730              | May-15-2007    | NET 30 DAYS | 10071 6547 RT0001 |           | May-29-2007 |

**Item # Qty P/N & Description**

|   |                |             |
|---|----------------|-------------|
| 1 | 1 EA SKID      | S/N B31013A |
|   | P/N D350748141 | W/O 67187   |
| 2 | 1 EA SKID      | S/N B31014A |
|   | P/N D350748141 | W/O 67188   |
| 3 | 1 EA SKID      | S/N B31016A |
|   | P/N D350748141 | W/O 67189   |
| 4 | 1 EA SKID      | S/N B29762A |
|   | P/N D350748241 | W/O 67190   |
| 5 | 1 EA SKID      | S/N B29764A |
|   | P/N D350748241 | W/O 67191   |
| 6 | 1 EA SKID      | S/N B29765A |
|   | P/N D350748241 | W/O 67192   |

**CERTIFICATE OF  
CONFORMANCE**

**CADORATH PLATING CO. LTD.  
2150 LOGAN AVENUE  
WINNIPEG, MANITOBA R2J-0J1**

**DATE:** May-29-2007

**CONSIGNEE TO:** Dart Aerospace Ltd.  
1270 Aberdeen St.  
Hawksbury, ON K6A 1K7

**W/O #:** 67192  
**INVOICE #:** 34601

**CONTRACT OR  
PURCHASE ORDER #**

3730

**DESCRIPTION:** SKID

**QTY** 1

**P/N #** D350748241

**S/N #** B29765A

CADMIUM PLATE IAW AMS-QQ-P-416 TYPE 2 CLASS 1. MPI IAW  
ASTM-E-1444. BAKE HEAT CHARTS #7795, #7797, #7838.

**CERTIFICATE:** I certify that the items indicated here on have  
been inspected and tested and conform to all specifications  
and requirements detailed on the contract or purchase order.

**Approved Inspector:**

*William Maruszynski*

